

Plant Design Integration, General Arrangement Drawings

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Plant Design Integration



- Requirements
 - Allocate space within NCSX Facility - Includes test cell and adjacent areas
 - Maintain 3D model and use it to extract general arrangement drawings
 - Update general arrangement drawings
 - Distribute to all NCSX WBS Managers monthly
- Interfaces
 - Include input from
 - All WBS elements which have items to install
 - Safety personnel
 - Operations personnel
 - Maintenance/upgrade personnel

Plant Design Integration



- Design status
 - 3D plant model developed over the past 8 years
 - Updated general arrangement drawings extracted from the 3D model are being emailed to WBS managers and posted on website
 - Brainstorming meetings being held for complex interfaces
- Cost and schedule estimates
 - To update models during April/May 2008:
 - 10 MD designer
 - 5 MD engineer
 - To maintain model/drawings until CD4 (based on cost of general arrangement drawings for NSTX)
 - 1.5 MD per month engineer
 - 1 MD per month designer



General Arrangement Drawings



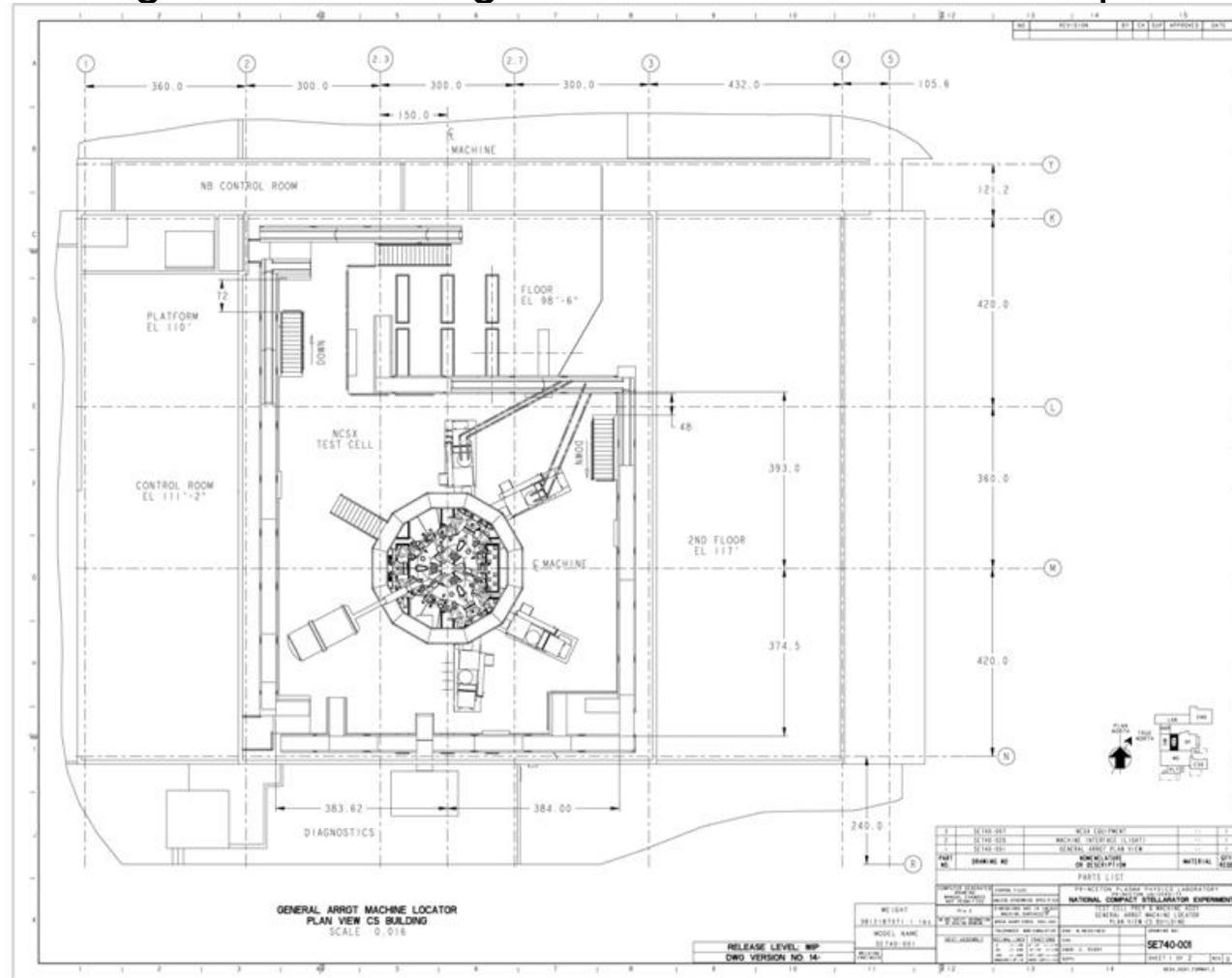
- NCSX Test Cell Model



General Arrangement Drawings



- General Arrangement drawing of NCSX Test Cell above platform



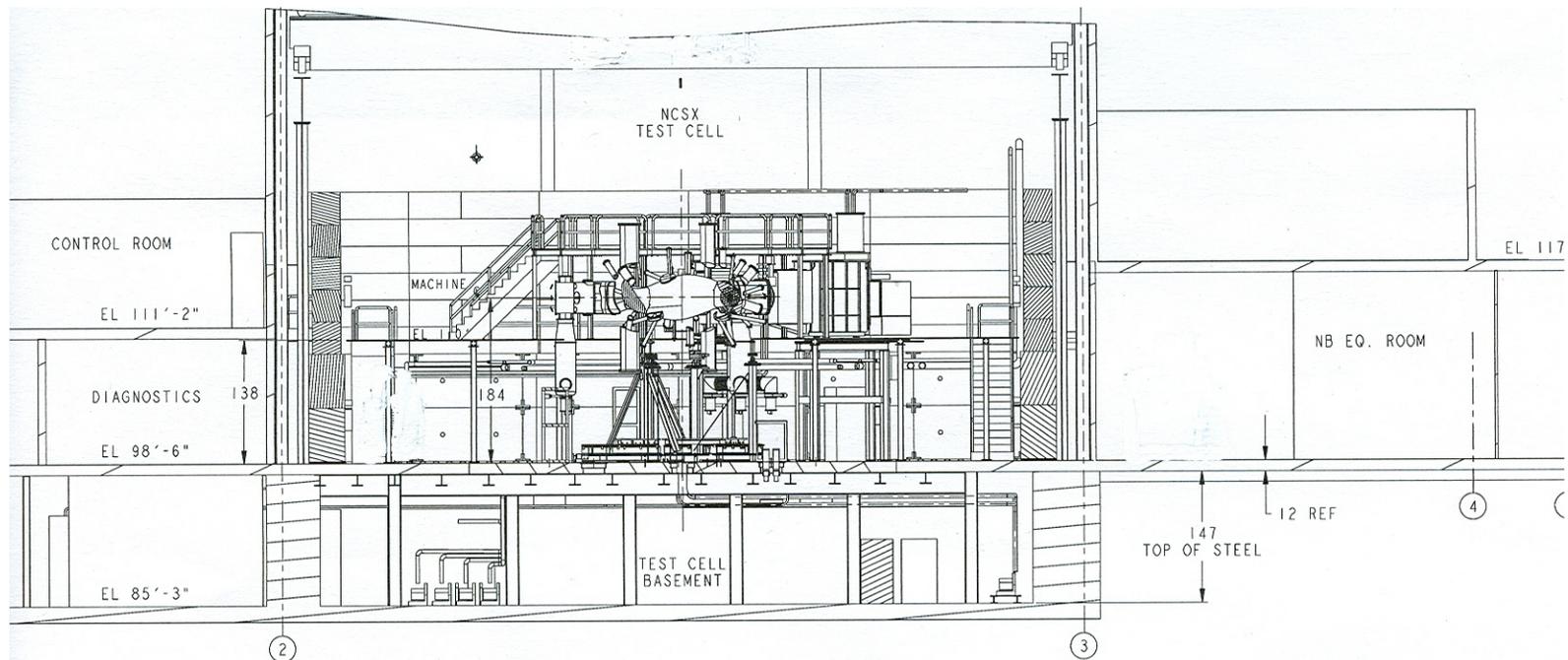
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General Arrangement Drawings



- General Arrangement drawing of NCSX Test Cell elevation
 - Basement / first floor / platform / catwalk around top of machine

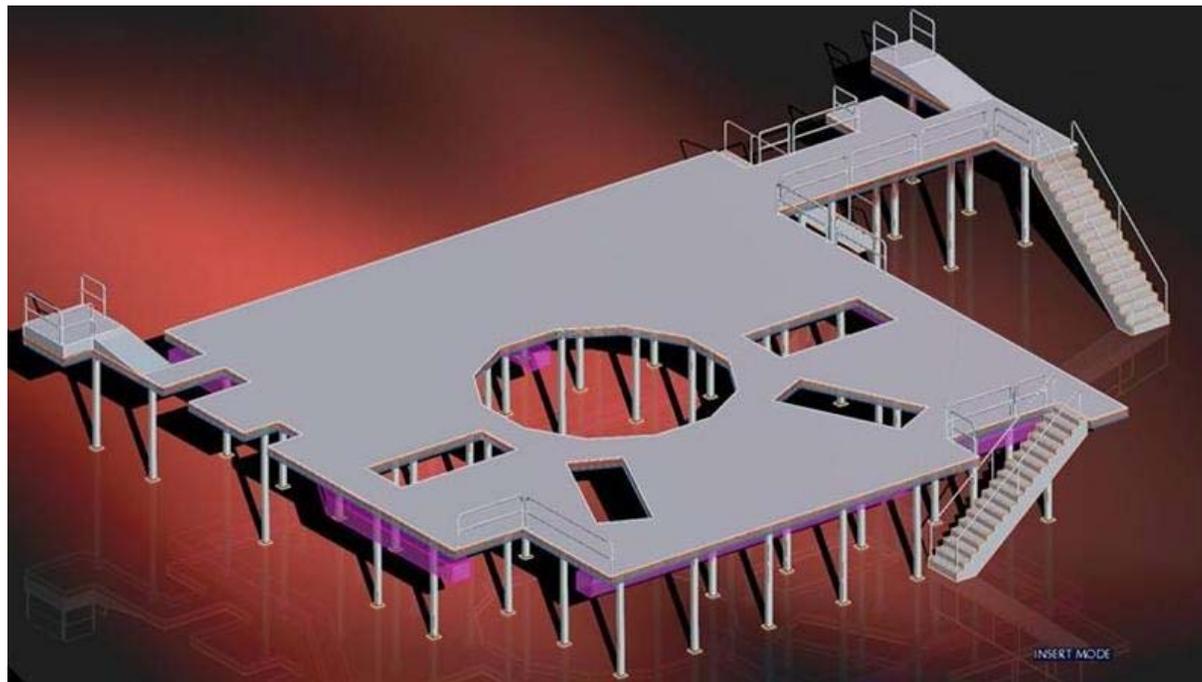


ELEVATION LOOKING NORTH
SECTION Y-Y
SCALE 0.020

3D Model of NCSX Platform



- 3D Model of NCSX Platform
 - Reviewing Life Safety Code requirements
 - Reviewing potential equipment interferences with platform legs
 - Reviewing placement of each item on/under platform to assure that all items can be installed, maintained and de-installed



Integrated Plant Design Related Items



- Review installation plans from all WBS Managers to assure that each piece does not interfere with other installations / maintenance / operations
 - Review crane coverage and roll-up door sizes with respect to items which need to be moved into the NCSX Test Cell (NCTC)
 - Also review equipment to be used to move material into NCTC
 - Establish staging areas for items waiting to be installed
- Coordinate installation of plant services (electric, air, lighting, HVAC etc) with Facilities Division